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PERSPECTIVES

The Time Is Now: Attention Increases to Transgender Health in the United States but Scientific Knowledge Gaps Remain

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Abstract

Attention to transgender health has dramatically increased in the U.S. Scientific knowledge gaps in empirical research, however, remain and act as barriers to achieving transgender-related health equity. We conducted a search using PubMed and PsycINFO to identify gaps in empirical, peer-reviewed publications related to adult transgender health in the U.S. between 1981 and 2013. We synthesized these findings and commented on opportunities for improving health research. Reducing health disparities and advancing transgender-related health equity requires greater investment in research that addresses current gaps to more comprehensively respond to the diverse health needs of transgender people.

Key words: gender minority health, peer-reviewed empirical research, research gaps, transgender.

Introduction

Transgender people have an assigned sex at birth that differs from their current gender identity or expression. Attention to transgender health has dramatically increased in the U.S. In 2014, the Department of Education released guidelines stating that transgender students are protected under Title IX, a regulation passed in 1972 to eliminate discrimination based on sex in federally funded educational programs and institutes. The 2013 Employment Non-Discrimination Act banned workplace discrimination based on gender identity and sexual orientation. The American Psychiatric Association moved to decrease the stigmatization of transgender people by renaming ''gender identity disorder'' as ''gender dysphoria,''[1] though not without pushback from many who feel the change in title did not address the implication that being transgender is a mental disorder. The arts, not surprisingly, can be credited with helping to promote greater transgender visibility across the U.S., including substantial attention turning to several transgender actors and activists. Contemporary social and cultural events have also brought transgender individuals and bodies to greater public awareness, especially in popular media (e.g., the television show ''Orange is the New Black'') and fashion (e.g., a photography essay of 17 diverse transgender models in a stunning black-and-white campaign called ''Brothers, Sisters, Sons & Daughters'' by luxury retailer Barneys New York). Across various fields and multidisciplinary domains, transgender people are receiving unprecedented levels of attention.

With respect to health, in 2011 the U.S. Institute of Medicine's (IOM) ground-breaking report on lesbian, gay, bisexual, and transgender (LGBT) health noted that little research has examined the health needs of transgender individuals.[2] Subsequently, the empirical body of research has grown steadily, documenting substantial disparities in HIV,[3,4] substance use and abuse,[5,6] and various negative mental health outcomes in transgender people.[7] Additionally, advocacy organizations have been critical in drawing attention to a range of health concerns faced by transgender individuals.[8,9] While important progress is being made, scientific knowledge gaps remain. In this report, we aim to build on the previous base of knowledge by commenting on opportunities for improving transgender health research in the U.S.

We searched PubMed and PsycINFO using key terms (e.g., transgender, transsexual, gender dysphoria, gender identity disorder, gender nonconformity) to identify peer-reviewed articles in English that used quantitative methods to study adult

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transgender health. Although this commentary does not report on a systematic review per se, we engaged in a structured search for all published records, beginning January 1981 (coinciding with the Diagnostic and Statistical Manual of Mental Disorders, Third Edition [DSM-III] publication referencing ''transsexualism'') through 2013.[10] Articles were excluded when transgender-specific information was not disaggregated, only intersex populations were addressed, qualitative methods or mixed-methods were used, results from a single case report were included, or samples focused on youth (age <18 years). All abstracts retrieved in this search (647 total) were collaboratively reviewed for population and methodological applicability (i.e., quantitative) by two members of the study team. Using a consensus-based and iterative approach, abstracts were then coded focusing on three types of output: taxonomy, themes, and theory.[11] This also included categorization of the abstract based on the article's primary outcome of interest. Our goal was to identify and organize the breadth of published literature. In so doing, salient gaps in public health research with transgender populations emerged. We summarize the gaps and opportunities in the field, and we comment on how they present critical opportunities to advance research in U.S. transgender health.

Gaps and Opportunities

The empirical body of research on the health of transgender individuals has grown steadily and has continued to document multiple health challenges facing transgender people. Early studies tended to focus on psychiatric diagnoses and outcomes associated with gender confirmation procedures (i.e., genital reassignment surgeries) but as the AIDS epidemic gained emergence in public health literature, studies increasingly focused on prevalence of and behavioral risks for HIV and other sexually transmitted infections (STIs) in transgender populations, particularly in transgender women. HIV and STIs continue to be the most documented health issues in studies of transgender people.[3,4] Prevalence estimates of HIV and STIs in transgender women are particularly high,[3,12] although few HIV/STI incidence data are available. The focus on HIV in many ways overshadows other critical health concerns, such as cancer and cardiovascular disease, which continue to be understudied despite concerns regarding their potential association with long-term hormone use and/or high rates of cigarette smoking.[13,14] Various gender affirmation procedures (e.g., cross-sex hormones and gender reassignment surgery) have been studied and evaluated.[15] Mental health problems represent a serious health concern for transgender people. Studies have found higher prevalence of suicide ideation and attempts in transgender people compared to non-transgender people,[16] in addition to high burden of substance use and abuse.[5,6] Several studies have noted the importance of social and familial networks on the health of transgender people.[17,18] With respect to HIV services and primary care services, studies have reported negative experiences with providers and healthcare systems, including being denied medical care.[19,20] Finally, studies have reported extensive transgender-related prejudice, including stigma, discrimination, and transphobia.[21] Despite increasing attention to transgender health, the following scientific knowledge gaps emerged.

The understanding of resilience and health-promoting processes is inadequate

Researchers are beginning to shift away from a disease-based model (transgender as disorder) to an identity-based model (transgender as identity).[22–24] Further research is needed to identify mechanisms through which transgender individuals cope with stress and overcome difficult life conditions influencing their health and wellbeing. Strengths-based interventions emphasizing coping, social support, and transgender identity and community empowerment may assist in reducing health inequities commonly observed in this population.

Studies are rarely grounded in sensitive theoretical frameworks

Theories regarding the roles of sex (as a biological construct) and gender (as a social construct), as determinants of health are surprisingly absent from transgender research literature. Incorporation of social stress frameworks into research, including the sexual minority stress model and syndemic theory,[25,26] may improve understanding of transgender health, though additional work is necessary to ensure they address intersecting minority statuses. Some scholars have begun to apply more gender sensitive frameworks,[6,27] though much work is still required.

Recognition of population complexity and heterogeneity remains minimal

The diversity of the transgender population challenges any simple characterization.[28–30] Differences in gender expressions, gender affirmation procedures, self-presentation, sexual identities and behaviors, and distinctions of race/ethnicity, geography, and culture exist. Moreover, even the language around transgender health continues to evolve from ''transsexual'' or ''transvestite'' in its earliest appearances in the biomedical literature to ''trans*'' in more contemporary writing in an effort to create more inclusive terminology, such as gender non-conforming individuals. Language not only evolves but also depends on regional differences across and within countries. For example, in India biological males who reject their masculine identity and identify with a range of other categories are called *kinnar* in Maharashtra, *thirunangi* in Tamil Nadu, or *shiv-shakthis* in Andhra Pradesh.[31] Further, transgender individuals may choose not to identify themselves openly according to their gender status and instead may wish to blend into society (i.e., live stealth). The transgender population complexity highlights the need for an intersectional perspective across public health efforts,[32] recognizing multiple identity parameters that simultaneously influence health outcomes for transgender people. Research must continue efforts to accurately measure different identities while simultaneously acknowledging their fluidity and diversity.

Attention to female-to-male health is lacking

There is minimal attention to female-to-male (FTM) health needs in the empirical, peer-reviewed literature. This includes lacking FTM data on HIV, STIs, and behaviors known to increase risk of HIV and STI transmission. Thus, many of the biological risks experienced by FTMs who

engage in unprotected anal or vaginal sex, particularly with non-transgender men who have sex with men, are often ignored. Further, other health issues such as breast, cervical, and uterine cancer are rarely investigated, though some attention has recently been drawn to the disparity in receipt of gynecological services between FTM and non-FTM patients.[33] Future research should focus on FTM and trans masculine identified people to raise their visibility.[34]

Studies are often limited to small clinical or community-based convenience samples

We note a primary reliance on convenience samples in the scientific literature. Greater efforts should be made to implement sampling approaches representative of transgender populations.[35] This includes studies recruiting transgender people via multiple sampling methods. New technological approaches also warrant integration and consideration in sampling, in order to better reach transgender people who live outside of major metropolitan areas and who do not frequent mapped venues where transgender people have been shown to congregate. For example, in studying HIV risk, Internet-based hook-ups available via different apps should be considered.[36] Also needed are studies with non-transgender comparison groups to document and understand health inequities by gender identity and to identify targets to achieve transgender-related health equity.[7,37,38]

Non-standardized measures of gender and health indicators are frequently employed

There is a lack of methodological attention to measurement in health research on transgender people, including a lack of inclusion of standardized and validated sex and gender measures to identify transgender respondents in population-level surveys.[39–41] A two-step method has been proposed to elucidate sex/gender differences across health outcomes.[39,40,42,43] Further, many studies do not use health or psychosocial measures validated for use with transgender populations making comparisons across studies difficult.[21] There are some exemplary studies;[44] but to conduct research that evaluates health trends over time and measures differences across groups allowing for comparisons, standardized and psychometrically validated measures must be more consistently employed.

Conclusion

Recognition of complex, overlapping relationships among different risk factors within a larger context of vulnerability has broadened the analysis of transgender health beyond studies of HIV and STIs and psychiatric diagnoses. Moreover, acknowledging that health is interrelated and interdependent on socio-structural factors such as housing, education, and employment, in addition to larger legal and policy contexts is critical. Many gaps highlighted here have been addressed comprehensively in qualitative work, especially from social science disciplines, further emphasizing the potential for multidisciplinary research to inform how programs and policies can address the health and wellbeing of transgender people. Continued work is needed to consider not only how qualitative research can compliment quantitative work, but also to employ (and publish) studies that engage both methodologies in an integrated manner to better understand the contexts in which these poor health outcomes are occurring.

Thus, to build on the current base of knowledge there are key action points to inform how research can better address the health needs of transgender communities. For example, research must improve our understanding of resilience processes and be conducted with theoretically grounded frameworks sensitive to transgender health. Improved recognition of population complexity and heterogeneity, and increased research on FTM and trans masculine health, will prove critical to conducting work comparable across contexts. Sampling methods must be improved, and measures capable of identifying transgender respondents in surveillance and epidemiologic surveys are key to understanding gender-related population health. Transgender people may face specific health and social/structural issues that warrant attention. For example, transformative actions that can prioritize transgender health include the allocation of specific research funding for the study of transgender health issues, improving medical education training for transgender clinical care, and inclusion of transgender individuals in public health policy and decision-making entities. This will not be accomplished without challenges—there is often well-founded distrust within transgender communities regarding how best to engage in respectful and mutually beneficial research collaborations. Indeed, substantial work must be done—for public health researchers, policymakers, programmers, and advocates alike—to ensure the reduction and elimination of inequities that challenge the health and wellbeing of transgender communities.

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